



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

Martwick

EPA Region 5 Records Ctr.



357084

REPLY TO THE ATTENTION OF:

August 30, 2007

VIA FAX AND REGULAR FIRST-CLASS MAIL

Mr. Thomas L. Cabbage
Covington & Burling
1201 Pennsylvania Av. NW
Washington, D.C. 20004-2401

Re: Lindsay Light Radioactive Thorium Contamination in Streeterville
Area Rights-of-Way

Dear Mr. Cabbage:

It was a pleasure to meet you in West Chicago at our June meeting with the City of West Chicago during which we discussed matters related to the Residential Areas Sites properties that underwent the Kerr-McGee and City of West Chicago thorium cleanup in the 1980s. I hope we continue to make progress in that area. This letter responds to your May 17, 2000 letter in which you expressed an interest in a "constructive dialogue in discussions of future remediation" with respect to identifying and removing thorium contamination from City of Chicago rights of ways.

Thank you for correcting my use of the "Kerr-McGee LLC" when the intended reference was to Kerr-McGee Chemical LLC, a former wholly-owned subsidiary of Kerr-McGee Corporation. That error occurred due to a hastily-made "find and replace" editing decision as I finalized the letter. Note that because the various Kerr-McGee corporate names are confusingly similar, it is not uncommon for "Kerr-McGee" to be used to refer to Kerr-McGee Chemical or Kerr-McGee Corporation. Likewise, Tronox Inc. and Tronox LLC are also confusingly similar and may inadvertently be interchanged.

U.S. EPA's expression of concern regarding Tronox' LLC willingness or ability to fund thorium contamination cleanup associated with Lindsay Light Company and its successors is not intended to disparage Tronox LLC or Tronox Inc. Various Tronox financial report analyses and SEC filings explain that Kerr-McGee Corporation and its subsidiaries were restructured to separate the energy business from other businesses to enhance the value of its "pure-play" energy business to investors. This separation strategy was hugely successful for Kerr-McGee Corporation investors and eventually relieved Kerr-McGee Corporation of the primary environmental legacy costs associated with its acquisition of Lindsay Light and Chemical Company's corporate successor.

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Those legacy costs are now Tronox's responsibility. While Tronox may be the third largest producer and marketer of titanium dioxide pigment, it does not have value comparable to its former parent's, Kerr-McGee Corporation's, reported \$16.4 billion at the time it was purchased by Anadarko Petroleum. Indeed, in a "challenging environment" Tronox has posted significant 2nd quarter 2007 losses and has taken steps to reduce its operating costs including eliminating positions, dismissing its chief operating officer, and restructuring its retirement program.

Tronox's long-term viability and ability to fund thorium cleanups is of peculiar interest to U.S. EPA. This interest is especially keen with respect to the Lindsay Light contamination in downtown Chicago, because to date, unlike the City of West Chicago where U.S. EPA ordered Kerr-McGee to investigate and clean up hundreds of properties, U.S. EPA has not similarly compelled Kerr-McGee to investigate and clean up each contaminated property and right-of-way in Streeterville. Instead, U.S. EPA issued a removal order directed at 316 E. Illinois Street which also required Kerr-McGee to investigate and remediate off-site contamination. Although Kerr-McGee declined to enter into any agreed order with U.S. EPA regarding Streeterville, as properties were redeveloped and rights-of-ways excavated, Kerr-McGee nonetheless cooperated with the property owners, developers and utilities and transported and disposed of thorium contamination that the other parties had removed. Since its spin-off from the parent Kerr-McGee Corporation, Tronox has been notably uncooperative with respect to the Streeterville contamination. That corporate behavioral change has not gone unnoticed and it may force U.S. EPA to reevaluate its enforcement options to ensure that the Streeterville area is properly investigated, monitored, and cleaned up.

Your explanation of Tronox' understanding of generally accepted accounting principles is instructive. A review of Tronox' Securities and Exchange Commission filings found no mention of the City of Chicago Lindsay Light environmental liabilities although U.S. EPA's 1996 removal order requires Kerr-McGee to investigate and remediate thorium contamination in Streeterville and data exists regarding known areas of thorium contamination. U.S. EPA disagrees with your assertion that any comparison of thorium remediation spending in Streeterville to thorium remediation spending in West Chicago is "wholly unfounded." As pages two and three of my April 18, 2007 letter detail, the contamination in Streeterville and West Chicago is the same contaminant produced by the same company and similar processes; the business moved from downtown Chicago to the City of West Chicago reusing the same factory equipment. It is reassuring to learn that the amount of Tronox' environmental reserves does not suggest that Tronox is unwilling to satisfy its legal obligations with respect to the 1996 U.S. EPA order to investigate and remediate thorium contamination located beyond the property boundaries of 316 E. Illinois. Nonetheless, Tronox continued financial ability to conduct transport and dispose of thorium contamination generated from development, utility installation and maintenance, and other activities in the rights-of-ways that expose potential radioactive contamination, will be carefully monitored.

Although you claim that Tronox has “never disavowed the terms of the [1999 Right-of-Way] Agreement,” as my letter of April 18, 2007 recounts, in October 2006, Tronox refused to transport and dispose of thorium contamination discovered as utility work for the development of the former Kraft property was performed in a designated right-of-way. Kerr-McGee’s obligations under the 1999 Right-of-Way Agreement were largely premised upon Kerr-McGee’s CERCLA liability and the company’s ability to more economically transport and dispose of thorium contamination than the property owners, developers, or U.S. EPA. U.S. EPA relied upon the 1999 Right-of-Way Agreement to ensure that potential and known thorium contamination in the rights-of-ways would be properly identified, managed and disposed of. Only upon execution of the 1999 Right-of-Way Agreement did U.S. EPA issue an on-site completion letter for 316 E. Illinois. Indeed, from 2000 to 2005, once “off-site” thorium contamination was identified in a right-of-way or private property, Kerr-McGee transported and disposed of it. This approach worked in downtown Chicago because the high real estate values allowed the property owners and developers to undertake the costs of identifying and managing thorium contamination. Obviously, in areas such as West Chicago, that do not enjoy similar property values, property owners and developers, could not afford to undertake such radiological investigations and removals. U.S. EPA urges Tronox to reflect upon the remediation cost savings and administrative resources conserved by this straightforward approach to cooperatively divide the costs of the Lindsay Light thorium cleanup which results in the removal of thorium from the rights-of-ways and private properties of Chicago, just as the thorium mill tailings cleanup performed in West Chicago residential areas, Reed-Keppler Park and Kress Creek and the West Branch of the DuPage River.

My letter of April 18, 2007, was intended to be very clear that U.S. EPA rejects Tronox’s risk assessment approach to leaving excavated thorium contaminated soils in Streeterville rights-of-ways. Tronox’s approach does not comply with relevant and appropriate regulations, it is not protective and offers poor long-term effectiveness. U.S. EPA believes that when utility or other construction work exposes thorium contaminated soils in the rights-of-ways, removing the thorium contamination from the rights-of-ways will safely reduce radiation exposure today and in the future. Your footnote claiming that only very minimal thorium contamination was discovered in the last seven years overlooked the Columbus Drive right-of-way contamination which contained thorium in excess of 4600 picoCuries per gram (pCi/g), and eventually included the removal of more than approximately 700 cubic yards of thorium-contaminated soil from the right-of-way.

It may be helpful to review key aspects of the Uranium Mill Tailing Radiation Control Act of 1978 (Public Law 95-604, 42 U.S.C. 7901) (UMTRCA) and 40 CFR Part 192 Subpart C Supplemental Standards and U.S. EPA’s implementing guidance. In enacting UMTRCA Congress found that uranium mill tailings located at inactive mill operations may pose a potential and significant radiation hazard to the public and that every reasonable effort should be made to

provide for the stabilization, disposal, and control in a safe and environmentally sound manner of such tailings in order to prevent or minimize radon diffusion into the environment and to prevent or minimize other environmental hazards. Congress recognized that long-term stabilization would reduce the chance of human intrusion, prevent the use of tailings as a construction material as backfill around structures or landfill, and protect piles from wind erosion and runoff. Further, the Environmental Impact Statement prepared for 40 CFR 192 explained, that the "ultimate objective of a tailings disposal program is not only to reduce the potential hazards to an acceptable level now, but also to provide this control for the anticipated life of the hazard. Unfortunately because of the long lifetime of thorium, the potential that tailings have for harming people will persist indefinitely."

Cleanup to 5 pCi/g above background, which has been established in Streeterville as 7.1 pCi/g, in accordance with 40 CFR Part 192 indicates that the property is suitable for unrestricted use. Your suggestion that U.S. EPA apply a supplemental standard derived from 40 CFR Subpart C to exposed right-of-way soil, by upwardly adjusting the cleanup goal from 5 pCi/g above background to a value in the hundreds of pCi/g not only contravenes UMTRCA, 40 CFR 192 Subpart C, and U.S. EPA policy but it flies in the face of common sense. U.S. EPA's policy regarding Subpart C of 40 CFR 192 recognizes that alternative site-specific standards may be established under some special circumstances to allow the selection and performance of remedial actions that come as close as reasonably achievable to meeting the UMTRCA standards.¹ The supplemental standards were not intended for property subject to frequent excavation and exposure of contaminated materials but limited to those situations where effective institutional controls prevented exposure of known contamination. But here the City street, sidewalk and utility workers and developers regularly excavate and intrude into the rights-of-ways. Because these workers excavate or expose potential radioactively contaminated soils in Streeterville rights-of-ways, U.S. EPA prudently requires that they perform proper health and safety and material management practices generally consisting of radiological monitoring and proper management and disposal of thorium contaminated materials. U.S. EPA requires any thorium-contaminated material to be managed so it is not simply dumped on the street or transported off-site to create another CERCLA removal site. The radiation risk to workers and the public will depend upon the thorium concentrations in the excavated materials and right-of-ways concentrations have ranged as high as 4620 pCi/g, or up to 650 times the UMTRCA standard of 7.1 Pci/g at Streeterville. With few

¹Here, with respect to the rights-of-ways not undergoing excavation related to construction, installation or intrusive maintenance activities, U.S. EPA, in effect, informally has applied a supplemental standard because U.S. EPA has not required Tronox to excavate these otherwise intact streets and sidewalk right-of-ways in Streeterville and then dispose of all thorium contamination identified.

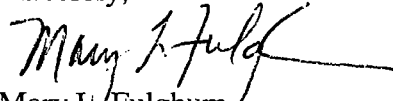
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exceptions, the volume of materials removed from a right-of-way, has been dictated by the amount of soil that must be removed to access or replace a particular utility. Thus, generally, there is not a significant difference in the time the construction worker is potentially exposed to thorium contamination or non-radiation risks.

Tronox apparently does not know how or where the radioactive wastes from its predecessor's operations were managed and dispersed throughout Streeterville area. So long as there are utilities to be installed and maintained, the rights-of-ways in Streeterville will continue to be exposed and excavated and the potential to encounter radioactive thorium will exist. It is neither prudent or reasonable to leave known thorium contamination in any right-of-way when the contamination is discovered during excavation work. If left in place, there is a significant likelihood that the radioactive contamination will be repeatedly encountered in the future and with each intrusion into the right-of-way, the potential for uncontrolled release may be realized. U.S. EPA suggests as an alternative, that wherever clean fill is used to replace material removed from Streeterville right-of-ways, that information be recorded in a manner so that continued radiological survey of that right-of-way, or portion thereof, would not be necessary. As indicated in my April 18 letter, U.S. EPA remains interested in reopening a dialogue with Tronox with respect to the characterization of the extent of thorium contamination in downtown Chicago to finally achieve the requirements of the 1996 Unilateral Order for the investigation and cleanup of off-site radioactive thorium contamination.

I look forward to working together to cleanup thorium contamination in Streeterville. If you wish to discuss this further, please contact me at (312) 886-4683 or Cathleen Martwick at (312) 886-7166.

Sincerely,



Mary L. Fulghum
Associate Regional Counsel

cc: Mort Ames, City of Chicago Corporation Counsel
Vincent S. Oleszkiewicz, Duane Morris